

RAW SEQUENCE LISTING

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Application Serial Number: 09/478,567
Source: IFW0
Date Processed by STIC: 06-15-2005

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IFWO

RAW SEQUENCE LISTING

DATE: 06/15/2005

PATENT APPLICATION: US/09/478,567

TIME: 15:09:28

Input Set : N:\Crf3\RULE60\09478567.raw.txt

Output Set: N:\CRF4\06152005\I478567.raw

1 <110> APPLICANT: Rao, Gururaj A.
 2 Major Sleister, Heidi
 3 <120> TITLE OF INVENTION: Compositions and Methods for Altering Amino Acid
 4 Content of Proteins
 5 <130> FILE REFERENCE: 5718-16
 6 <140> CURRENT APPLICATION NUMBER: US/09/478,567
 7 <141> CURRENT FILING DATE: 2000-01-06
 8 <150> PRIOR APPLICATION NUMBER: US/08/988,015
 9 <151> PRIOR FILING DATE: 1997-12-10
 10 <160> NUMBER OF SEQ ID NOS: 11
 11 <170> SOFTWARE: PatentIn Ver. 2.0
 13 <210> SEQ ID NO: 1
 14 <211> LENGTH: 218
 15 <212> TYPE: PRT
 16 <213> ORGANISM: Glycine max
 17 <400> SEQUENCE: 1
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 20 His Asn Ile Arg Ala Phe Lys Thr Ile Pro Glu Glu Cys Val Ser Pro
 21 20 25 30
 22 Thr Lys Asp Tyr Ile Asn Gly Glu Gln Phe Arg Ser Asp Ser Lys Thr
 23 35 40 45
 24 Val Asn Gln Gln Ala Phe Phe Tyr Ala Ser Glu Arg Glu Val His His
 25 50 55 60
 26 Asn Asp Ile Phe Ile Phe Gly Ile Asp Asn Thr Val Leu Ser Asn Ile
 27 65 70 75 80
 28 Pro Tyr Tyr Glu Lys His Gly Tyr Gly Val Glu Glu Phe Asn Glu Thr
 29 85 90 95
 30 Leu Tyr Asp Glu Trp Val Asn Lys Gly Asp Ala Pro Ala Leu Pro Glu
 31 100 105 110
 32 Thr Leu Lys Asn Tyr Asn Lys Leu Leu Ser Leu Gly Phe Lys Ile Val
 33 115 120 125
 34 Phe Leu Ser Gly Arg Tyr Leu Asp Lys Met Ala Val Thr Glu Ala Asn
 35 130 135 140
 36 Leu Lys Lys Ala Gly Phe His Thr Trp Glu Gln Leu Ile Leu Lys Asp
 37 145 150 155 160
 38 Pro His Leu Ile Thr Pro Asn Ala Leu Ser Tyr Lys Ser Ala Met Arg
 39 165 170 175
 40 Glu Asn Leu Leu Arg Gln Gly Tyr Arg Ile Val Gly Ile Ile Gly Asp
 41 180 185 190
 42 Gln Trp Ser Asp Leu Leu Gly Asp His Arg Gly Glu Ser Arg Thr Phe
 43 195 200 205
 44 Lys Leu Pro Asn Pro Met Tyr Tyr Ile Glu

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Input Set : N:\CrF3\RULE60\09478567.raw.txt

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 48 <211> LENGTH: 218
 49 <212> TYPE: PRT
 50 <213> ORGANISM: Glycine max
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 54 His Asn Ile Phe Gly Phe Glu Thr Ile Pro Glu Glu Cys Val Glu Ala
 55 20 25 30
 56 Thr Lys Glu Tyr Ile His Gly Glu Gln Tyr Arg Ser Asp Ser Lys Thr
 57 35 40 45
 58 Val Asn Gln Gln Ala Tyr Phe Tyr Ala Arg Asp Leu Glu Val His Pro
 59 50 55 60
 60 Lys Asp Thr Phe Val Phe Ser Ile Asp Asn Thr Val Leu Ser Asn Ile
 61 65 70 75 80
 62 Pro Tyr Tyr Lys His Gly Tyr Gly Val Glu Lys Phe Asn Ser Thr
 63 85 90 95
 64 Leu Tyr Asp Glu Trp Val Asn Lys Gly Asn Ala Pro Ser Leu Pro Glu
 65 100 105 110
 66 Thr Leu Lys Asn Tyr Asn Lys Leu Val Ser Leu Gly Phe Lys Ile Ile
 67 115 120 125
 68 Phe Leu Ser Gly Arg Thr Leu Asp Lys Gln Ala Val Thr Glu Ala Asn
 69 130 135 140
 70 Leu Lys Lys Ala Gly Tyr His Thr Trp Glu Lys Leu Ile Leu Lys Asp
 71 145 150 155 160
 72 Pro Gln Pro Ser Thr Pro Asn Ala Val Ser Tyr Lys Thr Ala Ala Arg
 73 165 170 175
 74 Glu Lys Leu Ile Arg Gln Gly Tyr Asn Ile Val Gly Ile Ile Gly Asp
 75 180 185 190
 76 Gln Trp Ser Asp Leu Leu Gly Gly His Arg Gly Glu Ser Arg Thr Phe
 77 195 200 205
 78 Lys Leu Pro Asn Pro Leu Tyr Tyr Ile Gln
 79 210 215
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 82 <211> LENGTH: 214
 83 <212> TYPE: PRT
 84 <213> ORGANISM: Lycopersicon esculentum
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 88 Pro Trp Lys Thr Ile Pro Glu Glu Cys Ala Asp Tyr Val Lys Glu Tyr
 89 20 25 30
 90 Met Val Gly Pro Gly Tyr Lys Met Glu Ile Asp Arg Val Ser Asp Glu
 91 35 40 45
 92 Ala Gly Glu Tyr Ala Lys Ser Val Asp Leu Gly Asp Asp Gly Arg Asp
 93 50 55 60
 94 Val Trp Ile Phe Asp Val Asp Glu Thr Leu Leu Ser Asn Leu Pro Tyr
 95 65 70 75 80

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96. Tyr Ser Asp His Arg Tyr Gly Leu Glu Val Phe Asp Asp Val Glu Phe
 97. 85 90 95
 98. Asp Lys Trp Val Glu Asn Gly Thr Ala Pro Ala Leu Gly Ser Ser Leu
 99. 100 105 110
 100. Lys Leu Tyr Gln Glu Val Leu Lys Leu Gly Phe Lys Val Phe Leu Leu
 101. 115 120 125
 102. Thr Gly Arg Ser Glu Arg His Arg Ser Val Thr Val Glu Asn Leu Met
 103. 130 135 140
 104. Asn Ala Gly Phe His Asp Trp His Lys Leu Ile Leu Arg Gly Ser Asp
 105. 145 150 155 160
 106. His Gly Lys Thr Ala Thr Thr Tyr Lys Ser Glu Arg Arg Asn Ala Met
 107. 165 170 175
 108. Val Glu Glu Gly Phe Arg Ile Val Gly Asn Ser Gly Asp Gln Trp Ser
 109. 180 185 190
 110. Asp Leu Leu Gly Ser Ser Met Ser Tyr Arg Ser Phe Lys Leu Pro Asn
 111. 195 200 205
 112. Pro Met Tyr Tyr Ile Leu
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 115 <210> SEQ ID NO: 4
 116 <211> LENGTH: 217
 117 <212> TYPE: PRT
 118 <213> ORGANISM: Phaseolus vulgaris
 119 <400> SEQUENCE: 4
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 122. Gln Asn Ile Phe Gly Phe Glu Thr Ile Pro Gln Gln Cys Val Asp Ala
 123. 20 25 30
 124. Thr Ala Asn Tyr Ile Glu Gly Gly Gln Tyr Arg Ser Asp Ser Lys Thr
 125. 35 40 45
 126. Val Asn Gln Gln Ile Tyr Phe Phe Ala Arg Asp Arg His Val His Glu
 127. 50 55 60
 128. Asn Asp Val Ile Leu Phe Asn Ile Asp Gly Thr Ala Leu Ser Asn Ile
 129. 65 70 75 80
 130. Pro Tyr Tyr Ser Gln His Gly Tyr Gly Ser Glu Lys Phe Asp Ser Glu
 131. 85 90 95
 132. Arg Tyr Asp Glu Glu Phe Val Asn Lys Gly Glu Ala Pro Ala Leu Pro
 133. 100 105 110
 134. Glu Thr Leu Lys Asn Tyr Asn Lys Leu Val Ser Leu Gly Tyr Lys Ile
 135. 115 120 125
 136. Ile Phe Leu Ser Gly Arg Leu Lys Asp Lys Arg Ala Val Thr Glu Ala
 137. 130 135 140
 138. Asn Leu Lys Lys Ala Gly Tyr Asn Thr Trp Glu Lys Leu Ile Leu Lys
 139. 145 150 155 160
 140. Asp Pro Ser Asn Ser Ala Glu Asn Val Val Tyr Lys Thr Ala Glu Arg
 141. 165 170 175
 142. Ala Lys Leu Val Gln Glu Gly Tyr Arg Ile Val Gly Asn Ile Gly Asp
 143. 180 185 190
 144. Gln Trp Asn Asp Leu Lys Gly Glu Asn Arg Ala Ile Arg Ser Phe Lys
 145. 195 200 205

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146 Leu Pro Asn Pro Met Tyr Tyr Thr Lys
147 210 215
149 <210> SEQ ID NO: 5
150 <211> LENGTH: 214
151 <212> TYPE: PRT
152 <213> ORGANISM: Arabidopsis thaliana
153 <400> SEQUENCE: 5
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156 Asn Phe Asp Thr Val Pro Ala Asn Cys Lys Ala Tyr Val Glu Asp Tyr
157 20 25 30
158 Leu Ile Thr Ser Lys Gln Tyr Gln Tyr Asp Ser Lys Thr Val Asn Lys
159 35 40 45
160 Glu Ala Tyr Phe Tyr Ala Lys Gly Leu Ala Leu Lys Asn Asp Thr Ile
161 50 55 60
162 Asn Val Trp Ile Phe Asp Leu Asp Asp Thr Leu Leu Ser Ser Ile Pro
163 65 70 75 80
164 Tyr Tyr Ala Lys Tyr Gly Tyr Gly Thr Glu Asn Thr Ala Ala Gly Ala
165 85 90 95
166 Tyr Trp Ser Trp Leu Val Ser Gly Glu Thr Pro Gly Leu Pro Glu Thr
167 100 105 110
168 Leu His Leu Tyr Glu Asn Leu Leu Glu Leu Gly Ile Glu Pro Ile Ile
169 115 120 125
170 Ile Ser Asp Arg Trp Lys Lys Leu Ser Glu Ile Thr Ile Glu Asn Leu
171 130 135 140
172 Lys Ala Val Gly Val Thr Lys Trp Lys His Val Ile Leu Lys Pro Asn
173 145 150 155 160
174 Gly Lys Leu Thr Gln Val Val Tyr Lys Ser Lys Val Arg Asn Gly Leu
175 165 170 175
176 Val Arg Gln Gly Tyr Asn Ile Val Gly Ile Ile Gly Asp Gln Trp Ala
177 180 185 190
178 Asp Leu Val Glu Asp Thr Pro Gly Arg Val Phe Lys Leu Pro Asn Pro
179 195 200 205
180 Leu Tyr Tyr Val Pro Ser
181 210
183 <210> SEQ ID NO: 6
184 <211> LENGTH: 220
185 <212> TYPE: PRT
186 <213> ORGANISM: Arabidopsis thaliana
187 <400> SEQUENCE: 6
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189 1 5 10 15
190 Ser Asn Ile Ile Asn Phe Asp Thr Val Pro Ala Asn Cys Lys Ala Tyr
191 20 25 30
192 Val Glu Asp Tyr Leu Ile Thr Ser Lys Gln Tyr Gln Tyr Asp Ser Lys
193 35 40 45
194 Thr Val Asn Lys Glu Ala Tyr Phe Tyr Ala Lys Gly Leu Ala Leu Lys
195 50 55 60
196 Asn Asp Thr Val Asn Val Trp Ile Phe Asp Leu Asp Asp Thr Leu Leu

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199	85	90	95	
200	Ala Pro Gly Ala Tyr Trp Ser Trp Leu Glu Ser Gly Glu Ser Thr Pro			
201	100	105	110	
202	Gly Leu Pro Glu Thr Leu Tyr Leu Tyr Glu Asn Leu Leu Glu Leu Gly			
203	115	120	125	
204	Ile Glu Pro Ile Ile Ile Ser Asp Arg Trp Lys Lys Leu Ser Glu Val			
205	130	135	140	
206	Thr Val Glu Asn Leu Lys Ala Val Gly Val Thr Lys Trp Lys His Leu			
207	145	150	155	160
208	Ile Leu Lys Pro Asn Gly Ser Lys Leu Thr Gln Val Val Tyr Lys Ser			
209	165	170	175	
210	Lys Val Arg Asn Ser Leu Val Lys Lys Gly Tyr Asn Ile Val Gly Asn			
211	180	185	190	
212	Ile Gly Asp Gln Trp Ala Asp Leu Val Glu Asp Thr Pro Gly Arg Val			
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214	Phe Lys Leu Pro Asn Pro Leu Tyr Tyr Val Pro Ser			
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224	Ser Asn Ile Ile Asp Phe Asp Thr Val Pro Ala Asn Cys Lys Asp Tyr			
225	20	25	30	
226	Val Glu Asp Tyr Leu Ile Thr Ser Lys Gln Tyr Gln Tyr Asp Ser Lys			
227	35	40	45	
228	Thr Val Cys Lys Glu Ala Tyr Phe Tyr Ala Lys Gly Leu Ala Leu Lys			
229	50	55	60	
230	Asn Asp Thr Val Asn Val Trp Ile Phe Asp Leu Asp Asp Thr Leu Leu			
231	65	70	75	80
232	Ser Ser Ile Pro Tyr Tyr Ala Lys Tyr Gly Tyr Gly Thr Glu Lys Thr			
233	85	90	95	
234	Asp Pro Gly Ala Tyr Trp Leu Trp Leu Gly Thr Gly Ala Ser Thr Pro			
235	100	105	110	
236	Gly Leu Pro Glu Gly Leu Tyr Leu Tyr Gln Asn Ile Ile Glu Val Gly			
237	115	120	125	
238	Ile Glu Pro Ile Ile Leu Ser Val Arg Trp Lys Leu Trp Lys Asn Val			
239	130	135	140	
240	Thr Leu Asn Leu Glu Ala Ala Gly Val Thr Tyr Trp Lys His Leu Ile			
241	145	150	155	160
242	Leu Lys Pro Asn Gly Ser Asn Leu Arg Gln Val Val Tyr Lys Ser Lys			
243	165	170	175	
244	Val Arg Asn Lys Leu Val Lys Lys Gly Tyr Asn Ile Val Gly Asn Ile			
245	180	185	190	
246	Gly Asp Gln Trp Ala Asp Leu Val Glu Asp Thr Pro Gly Arg Val Phe			

VERIFICATION SUMMARY

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Input Set : N:\Crf3\RULE60\09478567.raw.txt

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